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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/541,157
Filing Date: June 30, 2005
Appellant(s): NGUYEN-KIM ET AL.

R. James Balls
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 1, 2009 appealing from the Office action mailed November 5, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,639,841	Jenkins	06-1997
US 6,361,768 B1	Galleguillos et al.	03-2002
US 6,403,074 B1	Blankenburg et al.	06-2002
US 6,645,476 B1	Morschhauser et al.	11-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 30-31, and 36-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (US 5,639,841) or Galleguillos et al. (US 6,361,768 B1) or Blankenburg et al. (US 6,403,074 B1) or Morschhauser et al. (US 6,645,476 B1).

US 5,639,841 to Jenkins discloses a polymer useful as thickeners and dispersants for aqueous systems, including cosmetic and pharmaceutical formulations (col. 9, lines 4-17). Prior art polymer is derived from 1-99.8 wt% of one or more nonionic, cationic and/ore amphoteric monomers, 0-98.8 wt% of one or more monoethylenically unsaturated monomers, 0.1-98.8 wt% of one or more monoethylenically unsaturated macromonomer, 0-20 wt% of one or more polyethylenically

unsaturated crosslinking monomers, and 0-25 wt% of one or more (meth)acrylates of a strong acid (see abstract). Suitable anionic, cationic monomers include (meth)acrylic acid, 2-acrylamido-2-methylpropane sulfonic acid, dimethylaminoethyl methacrylate, diethylaminoethyl methacrylate, disclosed within the scope of the instant (a) and (b) monomers as expressed in claims 30, 41-46 (col. 2, line 56 to col. 3, line 33). N-vinylpyrrolidone, (meth)acrylamide, hydroxyethyl (meth)acrylate, hydroxypropyl methacrylate, alkyl (meth)acrylates, and styrene derivatives were disclosed within the scope of the instant amide group-containing compound (c), and further monomer (d) as expressed in claims 30, and 38 (col. 2, lines 52, 54; col. 3, lines 38-43, 50-67). Prior art macromonomer (C) embraces the instant component (e) as expressed in claim 39, as prior art defines R^3 in formula (I) as a substituted or unsubstituted divalent organic residue of esters (col. 4, lines 1-18, 52-54). The instant crosslinking compound (f) recited in claim 47 is expressively disclosed in col. 6, lines 27-60. Polymeric dispersant such as copolymers of (meth)acrylic acid and their esters and derivatives , and polyvinyl alcohol further correspond to the instant components (e) and (g)

(col. 9, lines 18-36). Still further, US-841 teaches using the resultant polymers as dispersants and thickeners in a variety of aqueous system containing other polymers/resins (col. 9, line 53 to col. 10, line 3), thus, meeting the additional polyelectrolyte requirement expressed in claim 31.

US 6,361,768 to Galleguillos et al. discloses a hydrophilic ampholytic polymer derived from 10 to 45 mol% of at least one cationic amino group-containing monomer and 0.05 to 20 mol% anionic carboxyl functional monomer, about 35 to 95 mol% of at least one nonionic hydrophilic monomers, up to 10 mol% of hydrophobic monomers, and up to 1.5 mol% of a crosslinking monomer, suitably used in cosmetic and pharmaceutical applications (see abstract; col. 4 lines 36-49; col. 12, lines 26-40). Suitable anionic and cationic monomers include (meth)acrylic acid, N-dimethylaminopropylacrylamide, N-dimethylaminomethyl (meth)acrylate, N-vinylimidazole, and diallyl amines (col. 4, line 64 to col. 7, line 16). Suitable hydrophilic monomers include (meth)acrylamide, N-vinylpyrrolidone, and vinylcaprolactam, taught within the scope of the instant (c) component (col. 7, line 27 to col. 8, line 21; Tables 1 and 2). Other hydrophilic and hydrophobic monomers such as

hydroxyethyl (meth)acrylate and (meth)acrylamide and hydroxypropyl (meth)acrylate are disclosed within the scope of the instant component (d) as expressed in claim 38 (col. 7, lines 49-51; col. 8, line 54 to col. 10, line 8; Tables 1 and 2). Other non-ionic hydrophilic monomers such as polyalkylene oxide (meth)acrylates are taught within the scope of the instant (e) component (col. 7, lines 51-65; col. 9, lines 1-9, structure (A), lines 30-41). Suitable crosslinking monomers include various polyethylenically unsaturated monomers defined within the scope of the instant component (f) as expressed in claim 47 (col. 11, lines 31-58). Furthermore, prior art suggests incorporating other polymeric additives including surfactants, stabilizers, and dispersants, within the scope of the polyelectrolyte complex recited in claim 31 (col. 13, lines 1-6). Still further, the resultant polymer is suitably used as rheology modifiers and thickeners in various aqueous cosmetic and pharmaceutical formulations containing conventional polymeric additives, including polysiloxane polyether copolymer, within the scope of the instant component (g) (col. 13, lines 21-40; col. 13, line 66 to col. 14, line 65; col. 18, line 27 to col. 20, line 25).

US 6,403,074 B1 to Blankenburg et al. discloses a water-soluble or water-dispersible polymer produced by polymerizing 50-99.9 wt% of mixtures of ethylenically unsaturated monomers in the presence of polyalkylene oxide-containing silicone derivatives (see abstract). The preferred ethylenically unsaturated monomers are defined by formula I (col. 2, lines 41-61), including (meth)acrylic acid and its salts, esters and amides, acrylamidopropanesulfonic acid, N,N-dialkylaminoalkyl (meth)acrylates and (meth)acrylamides, vinylpyrrolidone, vinylformamide, vinylcaprolactam, hydroxyalkyl (meth)acrylates, alkylene glycol (meth)acrylates, styrenes, and vinylidene chloride, disclosed within the scope of the instant monomers/components (a) to (d) as expressed in the present claims (col. 2, line 62 to col. 5, line 25). Prior art further disclose crosslinking monomers and polymeric additives such as polyesters, encompassing the instant component (e) to (g) (col. 6, lines 10-45). Prior art polyalkylene oxide containing silicone derivatives (b) are further taught within the scope of the instant component (g)(col. 7, line 14 to col. 8, line 24; working Examples). The resultant polymers are taught to have utilities in cosmetic applications containing conventional additives,

within the scope of the polyelectrolyte expressed in claim 31 (col. 6, lines 65—67; col. 8, lines 30-47).

US 6,645,476 B1 to Morschhauser et al. discloses water-soluble polymers and their use in cosmetic and pharmaceutical compositions (see abstract). Specifically, prior art polymer is prepared by polymerizing one or more polyalkylene oxide-containing macromonomer, and one or more ethylenically unsaturated monomers (col. 2, lines 17-50). Suitable ethylenically unsaturated monomers include (meth)acrylic acid, AMPS, (meth)acryloylpropyltrimethyl ammonium chloride, esters and amides of (meth)acrylic acid, N-vinylpyrrolidone, N-vinylacetamide, N-vinylcaprolactam, vinyl chloride and vinylidene chloride, discloses within the scope of the instant monomers (a) to (d) (col. 2, line 51 to col. 3, line 22). Prior art macromonomer (A) falls within the scope of the instant component (e) and (g) as expressed in claims 39-40 (col. 2, lines 29-50; col. 3, lines 36-62). US-476 teaches the inclusion of crosslinking monomers including the polyethylenically unsaturated crosslinkers expressed in claim 47 (col. 4, lines 16-29). The resultant polymer is taught to be useful in various aqueous formulation containing known additives including polymeric dispersant and thickeners such as polyvinyl

alcohol, ethylene glycol esters, and starch derivatives, defined within the scope of the instant components (e) and (g) and the additional polyelectrolyte expressed in claims 31, , and 39-40 (col. 5, lines 31 to col. 6, line 22; col. 8, lines 20-38; col. 10, lines 1-17).

US-768 to Galleguillos et al. discloses using 0.05-20 mol% of anionic monomers and 10-45 mol% of cationic monomers, which fall within the recited (a):(b) ratios expressed in claims 30, and 36-37. Accordingly, it would have been obvious to one having ordinary skill in the art to select the respective monomers, crosslinkers, and polymeric additives within the claimed ratios, motivated by the reasonable expectation of success in preparing a hydrophilic ampholytic polymer with utilities as thickener or rheology modifiers. US-841 to Jenkins discloses 1-99.8 wt% of at least one anionic, cationic, non-ionic or amphoteric monomers. US-074 to Blankenburg et al. discloses using 50-99.9 wt% of mixtures of anionic, cationic, and nonionic monomers. US-476 to Morschhauser et al. appears to be silent regarding the compositional ranges of its ethylenically unsaturated comonomers. The examiner is of the position that being silent, US-476 is generic to any ratios and proportions, inclusive of appellants', absent

showing of unexpected/unusual results demonstrated for the scope of the present claims. Once the motivation of selecting the suitable monomers is provided and carried out, the discovery of optimum or workable ranges of the respective monomers within prior art general conditions would involve only routine skill in the art, absent showing of unexpected and/or unusual results demonstrated from the claimed molar ratios. Thus, rendering obvious the present claims.

(10) Response to Argument

Appellants' arguments filed in the Brief on September 1, 2009 have been fully considered. Regarding Jenkins (US-841), Blankenburg et al. (US-074) and Morschhauser et al. (US-476), the crux of appellants' argument lies in (1) prior art references do not require anionic and cationic monomers to be used together, (2) prior art do not specify a particular anionic to cationic ratio, and (3) prior art do not require the inclusion of specific amide group-containing compound as expressed in the present claims. As set forth in the preceding paragraphs, Jenkins (US-841) discloses 1-99.8 wt% of one or more anionic, cationic, non-ionic or amphoteric monomers. Blankenburg et al. (US-074) discloses using 50-99.9 wt% of mixtures of ethylenically

unsaturated monomers, inclusive of anionic, cationic,, and non-ionic monomers within the scope of the instant (a), (b) and (c) monomers. Morschhauser et al. (US-476) discloses one or more ethylenically unsaturated comonomer which contain oxygen, nitrogen, sulfur, phosphorus, chlorine and/or fluorine. Thus, the requirements (1) and (3) are met because it would have been obvious to one having ordinary skill in the art to select one or more anionic, cationic, or amide group-containing monomers from the lists of suitable monomer species provided in the references, motivated by the reasonable expectation of success as taught. Regarding the recited anionic to cationic molar ratios expressed in claims 30, and 36-37, since the general conditions of the present claims are disclosed in the references, the examiner is of the position that discovering the optimum or workable ranges of anionic and cationic monomers would involve only routine skill in the art. Appellants have not provided side-by-side comparative data showing the criticality in using anionic and cationic monomers in the recited ratios. Appellants further urge that although individual monomers corresponding to the instant claims can be found in the generic disclosures of prior art, they are not necessarily used in the working

examples. The examiner is of the position that prior art teachings are not only limited to the exemplified embodiments. One having ordinary skill in the art would have expected all embodiments within a reference to be relevant and functional as taught. Regarding Galleguillos et al. (US-768), appellants urge that the reference teaches away from the ratios of the present claims by disclosing that an excess of cationic monomers over anionic monomers should be used at col. 12, lines 45-59. Appellants further urge that every example of US-768 has molar amount of cationic monomer exceeding the molar amount of anionic monomer, and the disclosed range does not overlap with the claimed range. The examiner respectfully disagrees with appellants' assertion. US-768 discloses 0.05-20 mol% of anionic monomer, and 10-45 mol% of cationic monomer. Thus, an anionic to cationic molar ratio of up to 2 is expressively taught, clearly encompass the ranges expressed in claims 30, and 36-37 (col. 4, lines 36-49; col. 12, lines 26-33). US-768 is relevant for all it fairly teaches and not only for what is indicated as preferred or exemplified. Furthermore, contrary to appellants' assertion, even the lower limit in the preferred cationic to anionic ratio of 2 falls within the ratio expressed in

claim 30 (i.e. (b) to (a) of 1:0.5). Finally, appellants urge that one must select an anionic monomer, a cationic monomer, and an amide-group-containing monomer from a laundry list of monomers and lump them together to re-create the claimed invention. This is not found to be compelling because it is well settled that it is prima facie obvious for the skilled artisan to indiscriminately choose some from the many disclosed by the prior art, so long as the reference teaches that any one will work. See In re Lemin, 332 F.2d 839, 141 USPQ 814 (CCPA 1964); In re Rosicky, 276 F.2d 656, 125 USPQ 341 (CCPA 1960); Merck and Co., Inc. v. Biocraft Laboratories, Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989). Accordingly, the examiner's position is maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Helen L. Pezzuto/

Primary Patent Examiner

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